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③ Aug 54

④ CHARACTERISTICS OF TROOPS WITH VARYING LEVELS OF INFORMATION ABOUT ATOMIC EFFECTS.

DESERT ROCK IV.

⑤ Field Wingman, Scott Hunter,
Dr. Catalano.

Motivation, Morale and Leadership Division
HUMAN RESOURCES RESEARCH OFFICE
The George Washington University
Operating under contract with
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FOREWORD

This Memorandum is one in a series of publications which present the findings of HumRRO research on the psychological reactions of troops to an atomic maneuver conducted during Exercise DESERT ROCK IV ^{1/}. The maneuver, conducted in May 1952, involved stationing troops of an Armored Infantry Battalion in open trenches four miles from the 300-foot tower on which the atomic bomb was detonated. The psychological tests applied in DESERT ROCK IV were extensions of HumRRO studies of the first atomic maneuver in which troops participated, DESERT ROCK I, in November 1951 ^{2/}.

→ This Memorandum is an analysis of the relationship between two aspects of troops' information on atomic effects and the troops' reactions and characteristics. These two aspects are:

1. The extent to which they learned facts on atomic effects from an indoctrination given at Camp Desert Rock; and
2. Their level of information after the A-bomb maneuver had been completed.

-
- ^{1/} See HumRRO Technical Report No. 2, "DESERT ROCK IV; Reactions of an Armored Infantry Battalion to an Atomic Bomb Maneuver," August 1953, and Research Memorandum No. 1, "Troop Response to a Request for Volunteers to Occupy Positions in a Forward Area During an Atomic Bomb Explosion," August 1953.
- ^{2/} See HumRRO Technical Report No. 1, "DESERT ROCK I, A Psychological Study of Troop Reactions to an Atomic Explosion," February 1953.

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The findings in this Memorandum have implications to those who are working in the field of training for atomic warfare, and to those interested in the learning process in general.

A more direct analysis of the characteristics and reactions of troops with varying gain in information after an atomic effects indoctrination during the DESERT ROCK V maneuver, May and June 1953, will be presented in forthcoming reports.

This Research Memorandum was prepared by Berton Winograd, Scott Hunter, and Don Cahalan.

11
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SUMMARY OF FINDINGS

↓
Troops' gain in information on atomic effects after a special indoctrination on the subject was not found to be related to their personal characteristics or to their attitudes and reactions before the A-bomb maneuver. Those troops who learned more facts from the indoctrination were not found to differ in any systematic way from troops who learned fewer facts.

Troops' level of information on these same facts after the A-bomb maneuver was found to be related to their characteristics and reactions at that time in many important respects. In general, the troops with a higher level of information showed:

1. a higher level of education;
 2. a lower level of fear;
 3. a higher level of confidence about A-bomb combat;
 4. a great willingness to volunteer in A-bomb maneuver situations;
 5. more critical attitudes toward Army life; and
 6. more favorable attitudes toward the A-bomb maneuver.
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CONTENTS

	<u>Page</u>
FOREWORD	1
SUMMARY OF FINDINGS	iii
INTRODUCTION	1
FINDINGS IN DETAIL	4
I. Correlates of Gain in Information Through Indoctrination	4
II. Correlates of Post-Maneuver Information Level	7
A. Background Characteristics	10
b. Fear	12
C. Confidence	14
D. Willingness to Volunteer	15
E. Attitudes Toward the Army and Unit	16
F. Attitudes Toward the Maneuver	18

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INTRODUCTION

This Memorandum is primarily concerned with providing answers on the following two problems:

- I. How did the troops who learned more from the indoctrination given at Camp Desert Rock differ in their reactions and characteristics from troops who learned less;
- II. How did the troops who had a higher level of information after the A-bomb maneuver differ in their reactions and characteristics from troops who had a lower level of information at that time?

Selection of groups for analysis: The procedures used in obtaining the data for this Memorandum were as follows:

1. Three companies of the 701st Armored Infantry Battalion participating in the DESERT ROCK IV maneuver received a special four-hour indoctrination at Camp Desert Rock prior to the maneuver. These troops are termed the "indoctrinated" troops throughout this Memorandum. The special indoctrination was withheld from the other participant company. They received only the briefings which all troops received at the site of the maneuver on safety precautions specific to the maneuver; these troops are termed the "briefed" troops throughout this Memorandum.
2. The "indoctrinated" troops were arranged in a master list by company and by grade within company; they were then divided into four groups by assigning names in rotation. The same pro-

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cedure was followed to divide the "briefed" troops into two groups 3/.

3. Self administered, unsigned questionnaires incorporating a 26-item information test and questions on personal history and opinions and reactions were filled out by the participant troops according to this schedule:

(SEE TABLE 1)

Chapter 2 of Report TR-2 provided a detailed analysis of these changes in the level of information on atomic effects. The "Summary of Findings" reported:

Troops showed marked improvement in information about atomic effects as a result of a four-hour indoctrination at Desert Rock on the day before the A-bomb explosion participation in the maneuver made little further change in the over-all level of information the men had attained after the indoctrination 4/.

The findings of this Memorandum present two basic kinds of analyses:

3/ See Appendix A, HumRRO Report TR-2 for details on sampling

4/ HumRRO TR-2, op. cit., p. ix, x

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Table 1

	Number of Troops Tested		
	<u>Before</u> <u>Desert Rock</u>	<u>After the</u> <u>Desert Rock</u> <u>Indoctrination</u>	<u>The Afternoon</u> <u>of the</u> <u>Retention</u>
Indoctrinated	94	69	150
Briefed	NT <u>a/</u>	NU <u>b/</u>	128

a/ NT = Not tested

b/ NU = Not used in this analysis

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Chapter I, Correlates of Gain in Information through Indoctrination, analyzes the ways in which troops who learned more from the four hours of indoctrination at Desert Rock differed in their reactions and characteristics from troops who learned less. This analysis is limited to a study of the responses of the 65 "indoctrinated" troops who took the 20-item information test both at their home station (before any special indoctrination was given) and again just after the indoctrination, the day before the maneuver.

Chapter II, Correlates of Post-maneuver Information Level, compares troops who had a higher level of information, with troops who had a lower level of information on the test after the maneuver.

The data of this memorandum are presented in the form of relationships between information and each of several background and attitude variables (e.g., education, fear, confidence, etc.). The effect of the interrelationships among these latter variables could not be established definitely because the number of soldiers was too small. Because of this, relationships should be interpreted with caution; it is possible that an apparent relationship between information and one of the other variables was due to the influence of a third variable that is related to both. For example, the findings that information was related to the amount of troops' schooling and that information was also related to their method of entry into the Army may be explainable on the basis of a relationship between schooling and method of entry.

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FINDINGS IN DETAIL

CHAPTER I

CORRELATES OF GAIN IN INFORMATION THROUGH INDOCTRINATION

The most striking gain in troops' level of information resulted from the special indoctrination the day before the maneuver. Very little change in information level could be attributed to the maneuver itself. The same general pattern of information gain was observed in DESERT ROCK I 5/.

A study comparing the characteristics of soldiers who gained more information from the indoctrination with those who gained less is important in evaluating the relative effectiveness of that indoctrination on various types of troops. Accordingly, the 26-item information tests of the 65 "indoctrinated" men were scored for the number of correct answers both before and after the indoctrination. Twenty-seven men showed a gain of eight or more correct answers between the first and second tests; these men are called high gainers in this report. The other 38 men who did not show a gain of as many as eight correct responses are called low gainers. The difference between the first and second test scores of the low gainers ranged from a gain of seven correct responses down to some who had fewer correct on the

5/ HumRRO Report TR-1, op. cit., Chapter 3.

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second test than the first. 6/

The results: The answers of high gainers and low gainers on their first pre-maneuver test were compared on a wide range of questions (described in more detail in Chapter II), including:

Their background characteristics (education level, length of time in service, enlisted grade held, combat experience, etc.).

Responses to direct questions about their fear of atomic effects, and about reactions and symptoms reflecting anxiety not necessarily connected to atomic tests.

Confidence in themselves and in others.

Willingness to volunteer (for dangerous secret missions, or for atomic maneuvers).

Other reactions toward atomic maneuvers.

Reactions toward the Army and their own outfit.

On none of these questions was there a difference between the high gainers and low gainers that was statistically significant at

6/ Another measure of gain was computed which took into account the amount of gain possible from the first test score (the "effectiveness index"; see Hovland, Carl, et al., Studies in Social Psychology in World War II, Vol. III, Experiments in Mass Communication). This index was found to be so highly related to the measure of absolute gain (coefficient of correlation of .87) that the simpler measure of absolute gain was used in this analysis.

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the .05 level. 7/

The implication of this finding of a lack of an observable difference is that the indoctrination was about equally successful with all sub-groups among the troops receiving it. In general, the troops who were not confident tended to gain as much in information as troops who were confident; fearful troops gained no less information than troops who were not afraid; those who had a higher level of information before the exercise were not found to have learned more through the indoctrination than others; and even the less well-educated gained in information about as much as the better-educated.

These findings on this limited group of 65 Armored Infantrymen must be considered not necessarily applicable to the same type of indoctrination if applied on a different set of troops. Previous studies have indicated a relationship between information gain and education level 8/.

7/ That is, on none of the questions was the likelihood less than five out of 100 that the differences were due to chance alone. The measure used to test significance was chi-square.

8/ A relationship between information gain and educational level was found in a study of the effects of training films reported in Hovland, Carl, et al, op. cit., p. 153.

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CHAPTER II

CORRELATES OF POST-MANEUVER INFORMATION LEVEL

Chapter I reported a lack of statistically significant differences in the characteristics and reactions of troops who registered a high gain in information, in contrast to those exhibiting lower gain attributable to the special four-hour indoctrination. This Chapter describes the differences between troops of highest, medium, and lowest level of information on atomic effects, as observed in the single test administered the afternoon of the maneuver.

That differences in the characteristics of troops of varying levels of information would be expected was anticipated in the light of results on the earlier DESERT ROCK I study. In that study information level was found to be related to "self-confidence and lack of anxiety" 9/; and another study, concerning the effects of training films, found a positive relationship between levels of information and educational attainment 10/.

For this analysis of how troops' level of information was related to their characteristics and reactions, the results obtained from the

9/ HUMPRO Report TR-1, op. cit., p. 58. This DESERT ROCK I analysis was conducted on level of information after special indoctrination at Camp Desert Rock but before the detonation of the A-bomb. See Appendix to this Memorandum for a comparison of the relationships observed in DESERT ROCK I and DESERT ROCK IV.

10/ Hovland, Carl, et. al., op. cit., Vol. III, p. 152.

CONFIDENTIAL

post-maneuver test were utilized rather than results at some other stage. This was done because it was desired to include the effects of the maneuver experience in addition to the effects of the indoctrination. Throughout the following analysis, the findings are based on all participant troops, combining the briefed and indoctrinated troops. ^{11/} However, some relationships observed between information and reactions among the indoctrinated troops were found to be different among the briefed troops; therefore each section presents the relationships first for all participant troops, and then, if the relationships differed, for the indoctrinated and briefed troops separately.

The troops were divided into three levels of information on the basis of their scores on the 26-item information test:

	<u>No. of Correct Responses</u>	<u>No. of "Indoctrinated" troops</u>	<u>No. of Briefed troops</u>	<u>Total</u>
"Most informed"	14 or more	60	29	89
"Medium informed"	10 - 13	54	44	98
"Least informed"	0 - 9	36	55	91
Total		<u>150</u>	<u>128</u>	<u>278</u>
Average (mean) number of correct responses		12.6	10.5	11.6

^{11/} For a detailed description of the "indoctrinated" and "briefed" groups, see HUMPRO Report TR-2, pp. 5-6

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The six sections of this Chapter present findings on the relationship between level of information about atomic effects and the following types of data:

- A. Background characteristics (such as educational level, Army grade, length of service, etc.).
- B. Fear responses, either in answer to direct questions about fear or anxiety about atomic bomb effects, or as inferred from the frequency of reported symptoms indicating varying degrees of fear or anxiety).
- C. Confidence in self and in others (e.g., confidence in one's fighting ability, in one's outfit's readiness for combat).
- D. Willingness to volunteer for potentially dangerous duty.
- E. Attitudes toward the Army and unit.
- F. Attitudes toward the maneuver.

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A. Background Characteristics

The personal background of the troops in this research was found unrelated to the amount of information they acquired from a special indoctrination on atomic effects (see Chapter I). However, certain background characteristics elsewhere have been found to be significantly related to troops' behavior. For example, a soldier's intellectual ability--as measured by Army intelligence tests--has been found closely related to the number of years of schooling he has completed. Schooling, in turn, has been found to be related to information level.

Findings:

In the present study, a clear relationship emerged from the data on the personal history of the troops: Level of information was positively related to education.

(SEE FIGURE 1)

Fifty-six per cent of the most informed troops had completed 12 or more years in school, while only 22 per cent of the least informed had completed that many grades. This finding, considered along with the lack of relationship between information gain and education reported in Chapter I, suggests that the better-educated soldiers had more information about atomic effects before the Desert Rock indoctrination. Evidently they knew more facts than soldiers with less education because of their higher general information level and not as a result of the indoctrination.

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Figure 1

Per cent who finished 12th grade or more

Most informed	56
Medium informed	40
Least informed	22

$p < .001$ ^{a/}

a/ The p values in the figures in this chapter were computed by chi square. p is the probability that the observed relationship between information and the other variable would occur by chance alone. Six levels of probability are presented:

- $p < .001$ - less than or equal to one in 1000
- $p < .01$ - between one in 1000 and one in 100
- $p < .05$ - between one in 100 and five in 100
- $p < .10$ - between five in 100 and ten in 100
- $p < .20$ - between ten in 100 and 20 in 100
- $p > .20$ - greater than 20 in 100

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The troops' information level was also related to their method of entry into the Army. Men who had been drafted were better informed than men who had volunteered for the Army, but their length of service in the Army did not appear to be related to their amount of information.

Differences between indoctrinated and briefed troops:

Indoctrinated troops (who received the atomic effects indoctrination as part of their training during the maneuver) and briefed troops (who did not receive that indoctrination) were found to differ in the relationship between their information and three of their background characteristics.

Among indoctrinated troops, those who had been in combat were better informed than men who had not; non-coms were better informed than privates; the least informed were about as likely to have been in their outfits as long as the most informed.

Among briefed troops, no relationship was observed between information and combat experience; non-coms were no better informed than privates; men who were well informed tended to have been in their outfits longer than the less well informed.

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B. Fear Responses

The effect of the DESERT ROCK IV training program on troops' fear reactions was described in an earlier HUMRRO report.^{12/} This section describes the relationship of troops' fear after the maneuver to the information they had on atomic weapons and warfare.

Two different types of items were included in the anonymous questionnaire to measure the presence of fear: (1) questions asking directly about the troops' fear; (2) a scale of items asking about physical reactions found to be associated with fear, and a scale of items asking about psychosomatic complaints which have been found to vary depending on stress.

Findings:

In general, the findings show that the more information the troops had, the less likely they were to indicate on the questionnaire that they had been afraid during the maneuver.

Questions which asked directly about the troops' fear showed:

The most informed troops were less likely to report that they had been afraid of the flash, blast, immediate radiation, or residual radiation of the bomb than were the other troops. Figure 2 shows an example of this tendency.

^{12/} See HUMRRO TR-2, op. cit., Chapter 3.

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Figure 2

Per cent who reported they were afraid of immediate retaliation.

Most Informed	35
Medium Informed	53
Least Informed	55

$p < .001$

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The better informed the troops were, the less likely they were to believe they had been injured or not from the flash, blast, temperature radiation or residual radiation of the explosion. For an example, see FIGURE 4.

The relationship between information and the tendency of troops to feel they might have been injured by the effects of the bomb was in the same direction, but the relationships were not as strong.

(See FIGURE 4)

The most informed troops were less likely than other troops to say they had been worried about taking part in the maneuver.

(See FIGURE 5)

The two scales (physiological reactions and psychosomatic complaints)^{11/} yielded results that were consistent with those based on the direct questions.

(See FIGURE 6)

The better informed the troops were, the less likely they were to have reported either the physiological symptoms of fear or the psychosomatic complaints.

^{11/} For a discussion of these scales, their derivation and uses, see Hurd's Report T1-2, op. cit., pp. 37 - 42.

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Figure 3

Per cent who reported they thought they were in danger from
immediate radiation

Most informed	16
Medium informed	39
Least informed	52

$p < .001$

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Figure 4

Per cent who reported they thought they were
harmed by immediate radiation

Most informed	13
Medium informed	14
Least informed	22

p . ,20

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Figure 5

Per cent who reported being worried about taking part in the
maneuver

Most informed	42
Medium informed	57
Least informed	55

p .10

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Figure 6

Per cent who reported physical reactions

Most informed	22
Medium informed	36
Least informed	41

$p < .001$

Per cent who reported 5 or more psychosomatic complaints

Most informed	35
Medium informed	50
Least informed	47

$p < .05$

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C. Confidence

One of the objectives of the research was to determine the effect of the training program on the troops' confidence in their ability to carry out a mission with atomic weapons. This section examines the relationship between troops' information and their confidence in themselves, their outfits, and the ability of the experts to control atomic explosions.

Findings:

In general, the results indicate (1) a high positive relationship between atomic effects information and confidence about performance in A-bomb combat, and (2) no clear relationship with confidence in situations not directly concerned with A-bomb combat.

The better informed the troops were, the more likely they were to say that they would do all right in A-bomb combat.

(SEE FIGURE 7)

No clear relationship existed between information level and questions reflecting more general feelings of confidence. Informed troops were no more likely than uninformed troops to say they felt they would do well in conventional combat, or that their outfits were ready for combat. Neither was there a relationship between troops' information level and their confidence that experts could control H-bomb explosions.

In similar measures, the troops were asked whether they would rather have our planes drop an A-bomb or a conventional bomb on enemy positions ahead of them and whether they would feel safer

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Figure 7

Per cent who reported they would do all right in A-bomb combat

Most informed	70
Medium informed	67
Least informed	52

$p < .01$

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if our planes used A-bombs or conventional bombs. The positive relationship on both questions between information level and a preference for A-bomb operations is illustrated in figure 8.

(SEE FIGURE 8)

The better informed the troops were, the more likely they were to prefer A-bomb operations and to say that they would feel safer in combat if atomic weapons were used.

D. Willingness to Volunteer

Two measures of troops' willingness to volunteer for potentially dangerous duty were used in the DESERT ROCK IV study. One was a series of questions in the anonymous questionnaire, to which troops responded whether or not they would volunteer in various hypothetical situations. The other was a contrived situation in which troops were told that they would participate in another similar maneuver within the week. They were directed to check on a signed questionnaire which of two positions they would choose to occupy: the same positions they occupied the day before, or other positions one mile closer to the detonation.

Findings:

The responses on the anonymous questionnaire items show that the most informed troops were less willing than the other troops to volunteer to carry out a secret dangerous mission (the nature of which was unspecified); they were not shown to be different from other troops in their willingness to volunteer for a future (hypothetical) A-bomb maneuver; but more of them were willing to volunteer to stay in a foxhole three miles or less from the explo-

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Figure 8

Per cent who reported they would rather have our airplanes drop an A-bomb to a regular bomb if they were in front-line foxholes

Most informed	52
Medium informed	35
Least informed	22

p .001

Per cent who reported they thought they would be safer in ground fighting if we used A-bombs against an enemy

Most informed	39
Medium informed	35
Least informed	22

p .05

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sion of an A-bomb. This distance was one mile closer to Ground Zero than the position that the troops actually had occupied during the explosion.

(SEE FIGURE 9)

Thus, the more the situation was concerned specifically with an A-bomb maneuver like the one in which the troops had participated, the more the troops' information on atomic effects was related to their volunteering. When the A-bomb was not mentioned, fewer of the most informed troops said they would volunteer than did the less informed troops.

The on-the-record volunteering showed the same pattern as the questionnaire A-bomb-related volunteering: more of the informed troops tended to volunteer than did the uninformed.

(SEE FIGURE 10)

E. Attitudes Toward the Army and Unit

Studies made among troops during World War II have shown that better educated soldiers tend to be more critical of the Army and Army life than less well educated soldiers. 14/ Earlier in this report it was shown that information level was related to number of years of schooling completed. It is a reasonable expectation, then that the better informed troops held attitudes that were more critical toward the Army and Army life more than among less well informed troops.

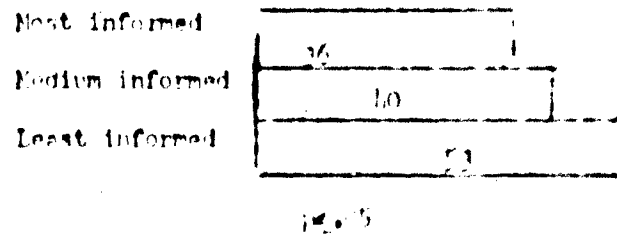
14/ Stouffer, Samuel A., et. al., Studies in Social Psychology in World War II, Vol. 1, The American Soldier: Adjustment During Army Life, Princeton University Press, 1949, p. 109.

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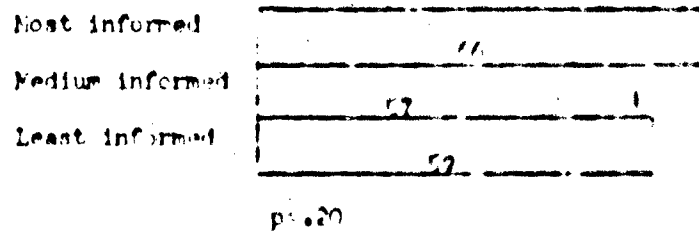
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Figure 2

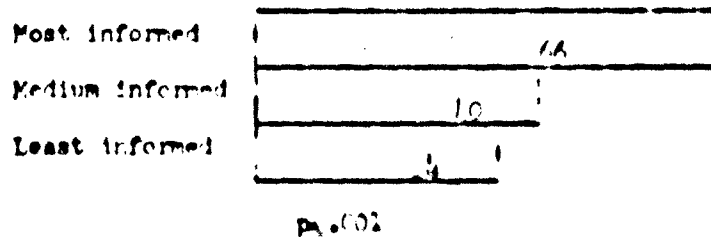
Per cent who reported they would volunteer for a secret, future mission



Per cent who reported they would volunteer for future Agent missions



Per cent who reported they would volunteer to stay in a safe hole 1 mile or less from ground zero when an Agent went off



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The following table shows the results of the regression analysis for the dependent variable "Number of children in the household" (N = 1,000). The independent variables are "Age of the head of household" and "Gender of the head of household". The results are presented in the following table:

1 8 2 9 3 4

15

[illegible]

22

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The anonymous questionnaire contained a series of items concerning troops' attitudes toward their officers, their outfits, their branch of service, and toward the Army.

Findings:

The better informed troops appeared to be more critical of the Army and Army life on all questions.

(SEE FIGURE 11)

The better informed the troops were, the less likely they were to feel that when their officers gave them something to do they also told them enough to enable them to do a good job;

the less likely they were to feel that men in their outfits usually carried out the orders of their officers willingly;

the less likely they were to feel that the Army was well run;

the less likely they were to feel that the A-bomb has made the Infantry more important;

and, the more likely they were to say that they would accept an Honorable Discharge if it were offered.

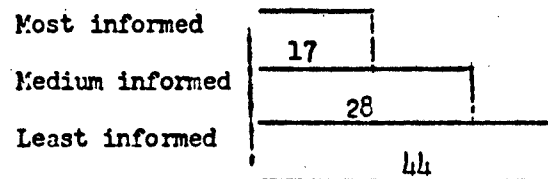
No relationship appeared between information level and the feeling that a man could be of greatest service to his country by being in the Army rather than in industry, on a farm, or in school. No relationship appeared between information and preference for their own outfits rather than some other outfit, or preference for the Army rather than one of the other services. No relationship appeared between information level and the soldier's feeling that he was the type that makes a good soldier.

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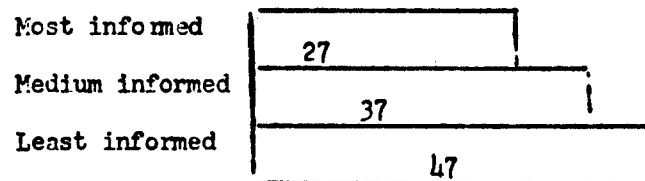
Figure 11

Per cent who reported that officers tell them enough to do a good job



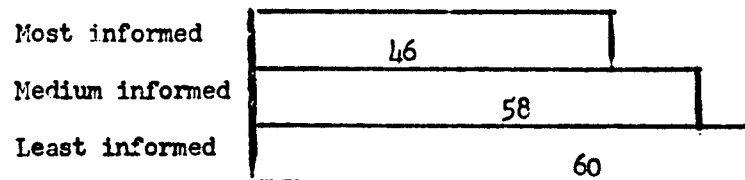
$p = .001$

Per cent who reported that men in their outfits carry out officers' orders willingly



$p \leq .01$

Per cent who reported that the Army is well run



$p = .10$

(Continued)

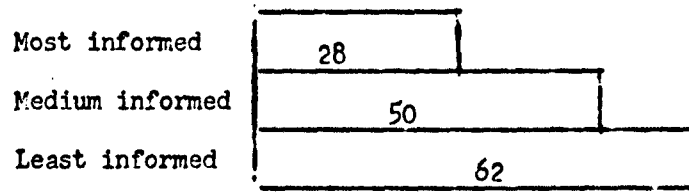
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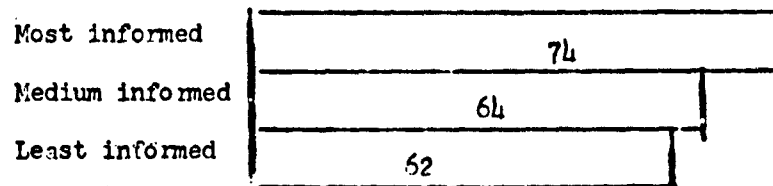
Figure 11

Per cent who reported that the A-bomb makes the Infantry more important



$p \leq .001$

Per cent who reported they would certainly accept an honorable discharge



$p \leq .20$

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Differences between indoctrinated and briefed troops:

Among indoctrinated troops, the most informed and medium informed troops were more likely than others to say they felt that the A-bomb made Armored units less important. As regards branch of service, both the most informed and the least informed were more likely than the medium informed to state a preference for their own branch of service, the Armored Infantry. Among indoctrinated troops, both the most informed and the least informed were more likely than the medium informed troops to express pride in their own outfits.

Among briefed troops, the medium informed troops were more likely than the others to express pride in their outfits. No significant relationship existed between information and feeling the A-bomb had made Armored units less important, or a preference for the Armored Infantry.

F. Attitudes Toward the Maneuver

Informed troops would be expected to relate the maneuver events to their knowledge of atomic effects more easily than troops who had less information. If this were so, they might be expected to show more favorable attitudes toward the maneuver. This is general was the case.

Findings:

The most informed troops were more likely than others to say they were "very glad" they were on the maneuver.

(SEE FIGURE 12)

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Figure 12

Per cent who reported being very glad to be on the maneuver

| | |
|-----------------|----|
| Most informed | 90 |
| Medium informed | 71 |
| Least informed | 73 |

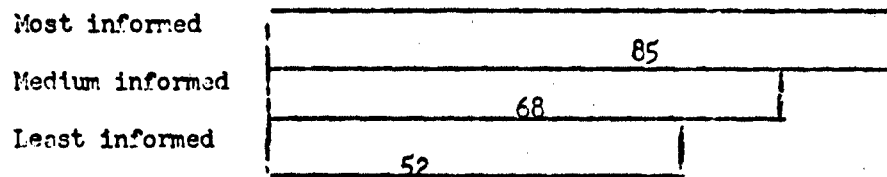
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Figure 13

Per cent who reported that the training made them less worried about
the effects of the A-bomb



$p < .001$

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The most informed troops were more likely than the other troops to say that the training they had received had made them less worried about the effects of an A-bomb explosion.

(SEE FIGURE 13)

The better informed the troops were, the more likely they were to say they felt the maneuver was "just about realistic enough" to suit them.

There was no clear relationship between information and troops' estimates of how valuable the maneuver was in training troops for combat, or how much talks had helped them understand how best to protect themselves during an A-bomb attack, or how much more information they felt they needed in order to be able to protect themselves during atomic attacks.

Differences between indoctrinated and briefed troops:

Among the indoctrinated troops, the most informed and medium informed troops were more likely than the least informed troops to feel that the maneuver was worth all the trouble the Army went to in staging it; among briefed troops, no such relationship existed.

CONCLUSIONS

In general, the troops who had a higher level of information after the maneuver were less afraid and more confident than troops with less information. Further, these informed troops held attitudes more favorable to the A-bomb maneuver than did the other troops.

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These same general tendencies were also observed in DESERT ROC: I (see the Appendix table that follows).

The finding in Chapter I in this Memorandum that learning from the indoctrination did not produce these relationships suggests that the relationships existed at some previous time. This implies that the kinds of soldiers who are more confident and who tend to be less afraid are also the kinds of soldiers who acquire more information. These facts must be interpreted in the light of the finding that these soldiers are also better educated and thus probably more intelligent.

Although it was not shown that the gain in specific knowledge from formal indoctrination could be predicted from previous troop characteristics, it was evident that soldiers who demonstrated a higher level of information were different in their characteristics and reactions from those who did not.

- 20 -
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RELATIONSHIP BETWEEN INFORMATION LEVEL AND QUESTIONS

ANALYZED FOR BOTH DESERT ROCK I AND DESERT ROCK IV^{a/}

| <u>Question^{b/}</u> | Relationship and (significance level) | |
|--|---------------------------------------|---------------------------|
| | <u>DESERT ROCK I</u> | <u>DESERT ROCK IV</u> |
| <u>Fear:</u> | | |
| How worried are you about the following effects of the A-bomb (NOT WORRIED AT ALL) | | |
| Flash | positive ($p \leq .01$) | positive ($p \leq .01$) |
| Blast | positive ($p \leq .05$) | positive ($p \leq .10$) |
| Immediate radiation | positive ($p \leq .01$) | positive ($p \leq .01$) |
| Residual radiation | positive ($p \leq .01$) | positive ($p \leq .01$) |
| How worried are you about taking part in this maneuver (NOT WORRIED AT ALL) | positive ($p \leq .01$) | positive ($p \leq .10$) |
| <u>Confidence:</u> | | |
| How do you think you would do in actual fighting? (DO ALL RIGHT) | positive ($p \leq .01$) | positive ($p \leq .30$) |
| How do you think you would do in fighting in which A-bombs are used (DO ALL RIGHT) | positive ($p \leq .01$) | positive ($p \leq .01$) |
| Is your outfit ready for combat (NOW; IN A FEW WEEKS) | negative ($p \leq .30$) | positive ($p \leq .30$) |
| Do the experts know enough to use A-bombs in maneuvers (YES WITHOUT ANY DANGER) | positive ($p \leq .30$) | positive ($p \leq .30$) |
| <u>Volunteering:</u> | | |
| Would you volunteer for a secret dangerous mission (CERTAINLY; PROBABLY) | positive ($p \leq .10$) | negative ($p \leq .05$) |

a/ For Desert Rock I data see HUMPRO Report TR-1, op. cit., pp 56-57.

b/ The Desert Rock I questions were asked after the indoctrination, but before the detonation of the bomb; the Desert Rock IV questions were asked after the troops had inspected the damage done by the bomb.

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Relationship and (significance level)
DESERT ROCK I DESERT ROCK IV

Volunteering: (Continued)

| | | |
|--|-------------------------|------------------|
| Would you volunteer for another
A-bomb maneuver (YES, PROBABLY) | - - - <u>c/</u> (p>.30) | negative (p>.30) |
|--|-------------------------|------------------|

| | | |
|---|------------------|------------------|
| If given a choice between A-bomb and
regular maneuver which would you
choose (A-BOMB) | positive (p<.05) | positive (p<.01) |
|---|------------------|------------------|

This comparison shows that in general the relationship between troops' information and their reactions were the same in the two DESERT ROCK studies. In other words, despite the different conditions of the two maneuvers and ^{15/} of the two studies, most of the relationships that were observed in the DESERT ROCK I study were also observed in DESERT ROCK IV.

c/ indeterminate: neither negative nor positive.

15/ See DESERT ROCK IV, Introduction, p. 3, for examples of the differences.

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